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RECORDS

National Archives and Records Administration
Instructional Guide Series



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1989

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
OFFICE OF RECORDS ADMINISTRATION

Washington, D.C.

1989



Cover illustration:
Ft. Johnson and part of the Town of Smithville, NC, 1802. RG77,
Records of the Office of the Chief of Engineers (Drawer 65, sheet 26 c.)

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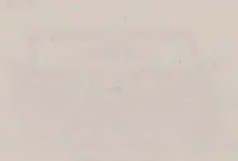
MANAGING CARTOGRAPHIC
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This Instructional Guide is available from:

Records Administration Information Center
Agency Services Division
National Archives and Records Administration
Washington, DC 20408

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PREFACE

The National Archives and Records Administration (NARA) Instructional Guide Series provides Federal agencies with detailed guidance on the management of specific types of records. Particular emphasis is placed on the proper techniques for identifying and handling those records that are, or may be appraised to be, permanently valuable, and are therefore intended for transfer to the National Archives.

These instructional guides help agencies create adequate and proper documentation of their activities, differentiate permanent from temporary records, set up appropriate filing or storage systems, develop retrieval mechanisms, and monitor the physical conditions under which records are stored.

“Managing Cartographic and Architectural Records” was written by Jeanne Young and Nancy G. Miller. The authors wish to thank Graeme McCluggage and William Heynen of the Cartographic and Architectural Branch of the Office of the National Archives for their assistance.

PREFACE

The National Archives and Records Administration (NARA) has a long history of providing guidance to the Federal Government on the management of records. This guidance has been developed through a process of consultation with the Federal Government and the public. The purpose of this guidance is to provide a framework for the management of records that is consistent with the National Archives and Records Administration's mission and the Federal Government's needs.

This guidance is intended to provide a framework for the management of records that is consistent with the National Archives and Records Administration's mission and the Federal Government's needs. It is intended to provide a framework for the management of records that is consistent with the National Archives and Records Administration's mission and the Federal Government's needs.

The National Archives and Records Administration (NARA) is committed to providing guidance to the Federal Government on the management of records. This guidance is intended to provide a framework for the management of records that is consistent with the National Archives and Records Administration's mission and the Federal Government's needs.

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INTRODUCTION

The Records Disposal Act (44 USC 3301) defines records as "...all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in conjunction with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of the data in them." Thus, any maps, aerial photographs, or architectural or engineering drawings that are created or received in the course of official business and maintained to document Government activities are Federal records.

This handbook provides guidance in the creation, maintenance and use, and disposition of maps, aerial photographs, and architectural and engineering drawings. Many Federal agencies create or receive and maintain these materials as documentation of agency programs in such areas as: exploring, surveying, and mapping; constructing and maintaining Federal buildings, military installations, and public works; managing natural resources; and recording and issuing patents.

Because these maps, aerial photographs, and drawings are Federal records, agencies must manage them properly and schedule their disposition. The term "disposition" is used to refer to what is done with records when they are no longer needed for current business. Disposition possibilities include transferring records from one Federal agency to another when functions are transferred, transferring them to Federal records centers, destroying temporary records, and accessioning permanent records into the National Archives of the United States. All these actions require the prior authorization of the National Archives and Records Administration (NARA). No records may be destroyed without the approval of the Archivist of the United States.

The preservation and eventual transfer of permanently valuable records to the National Archives is of special concern. The records

may exist on paper or film or as digital data in geographic information systems (GIS), in land information systems (LIS), or in computer aided design systems (CAD).

When an agency establishes an automated system, consultation with agency records managers and the National Archives early in the design phase is critical. This can help ensure that potentially permanent records are identified, that the system can produce the appropriate format for transferring the permanent records to the National Archives, and that retention periods are established for all data in the system, including input or source documents, master files, print files, and any hard-copy output.

Technical terms used in this guide are defined in the glossary (Appendix B).

SCHEDULING RECORDS

The Archivist of the United States grants approval for the disposition of Federal records by signing a records schedule that has been submitted by the agency's officials (see reference to Standard Form 115 below). As a result of the scheduling process, all records are categorized as either temporary or permanent. Temporary records are those approved by NARA for disposal, either immediately or after a specified retention period. Permanent records are those appraised by NARA to be sufficiently valuable that they should be preserved by the Federal Government beyond their current administrative, legal, and fiscal uses, because they document the organization and functions of the agency that created or received them and/or because they contain significant information about the persons, places, things, and phenomena with which the agency has dealt.

The National Archives issues General Records Schedules (GRS) that provide mandatory disposition instructions for records that are common to several or all the agencies of the Federal Government. (See Appendix A for a list of all cartographic, aerial photographic, and archi-

REQUEST FOR RECORDS DISPOSITION AUTHORITY <i>(See Instructions on reverse)</i>		LEAVE BLANK	
		JOB NO.	
TO: GENERAL SERVICES ADMINISTRATION NATIONAL ARCHIVES AND RECORDS SERVICE, WASHINGTON, DC 20408		DATE RECEIVED	
1. FROM (Agency or establishment)		NOTIFICATION TO AGENCY In accordance with the provisions of 44 U.S.C. 3303a the disposal request, including amendments, is approved except for items that may be marked "disposition not approved" or "withdrawn" in column 10. If no records are proposed for disposal, the signature of the Archivist is not required.	
2. MAJOR SUBDIVISION			
3. MINOR SUBDIVISION			
4. NAME OF PERSON WITH WHOM TO CONFER	5. TELEPHONE EXT.	DATE	ARCHIVIST OF THE UNITED STATES
6. CERTIFICATE OF AGENCY REPRESENTATIVE			
<p>I hereby certify that I am authorized to act for this agency in matters pertaining to the disposal of the agency's records; that the records proposed for disposal in this Request of _____ page(s) are not now needed for the business of this agency or will not be needed after the retention periods specified; and that written concurrence from the General Accounting Office, if required under the provisions of Title 8 of the GAO Manual for Guidance of Federal Agencies, is attached.</p> <p>A. GAO concurrence: <input type="checkbox"/> is attached; or <input type="checkbox"/> is unnecessary.</p>			
B. DATE	C. SIGNATURE OF AGENCY REPRESENTATIVE		D. TITLE
7. ITEM NO.	8. DESCRIPTION OF ITEM <i>(With Inclusive Dates or Retention Periods)</i>		9. GRS OR SUPERSEDED JOB CITATION
			10. ACTION TAKEN <i>(NARS USE ONLY)</i>

tectural and engineering records that are disposable under the authority of the GRS.) All records that are not disposable by authority of the GRS must be described on a Standard Form 115, Request for Records Disposition Authority (commonly referred to as a records schedule). Proposed dispositions for each series must be listed separately on the SF 115, which is then submitted to NARA for approval. The proposed dispositions may not be applied to the records until the SF 115 has been signed by the Archivist of the United States.

Records disposition takes place according to the instructions on the SF 115, which may be incorporated into an agency's manual. Records that have been identified as permanent may be transferred directly to NARA when they are no longer needed for agency business, or they may be stored for a period of time in a Federal Records Center. Detailed instructions for scheduling records and transferring them to the FRC are listed in 36 CFR 1228 and in the NARA handbook "Disposition of Federal Records." Records identified as temporary may be destroyed by the agency, or they may be stored in the FRC from the time that they are no longer needed for the agency's current business until they become eligible for disposal.

In preparing a schedule for cartographic, aerial photographic, or architectural records, keep in mind the following guidelines:

1. Review recordkeeping requirements for all cartographic, aerial photographic, and architectural records, and establish requirements where they are lacking. Designate which documents are records and which are nonrecord materials.
2. Inventory and schedule the records in conjunction with textual records that pertain to the same subject. Cartographic, aerial photographic, and architectural records should be evaluated alongside other agency records; they should not be evaluated in isolation because of their format.
3. Schedule the records as early as possible after their creation or acquisition by the agency. Early identification is important to ensure proper storage and maintenance of permanent records.
4. Schedule the records as series. Although they vary in dimension and format, cartographic, aerial photographic, and architectural records are usually created or accumulated in series or related file

units and they should be scheduled by series rather than as individual items.

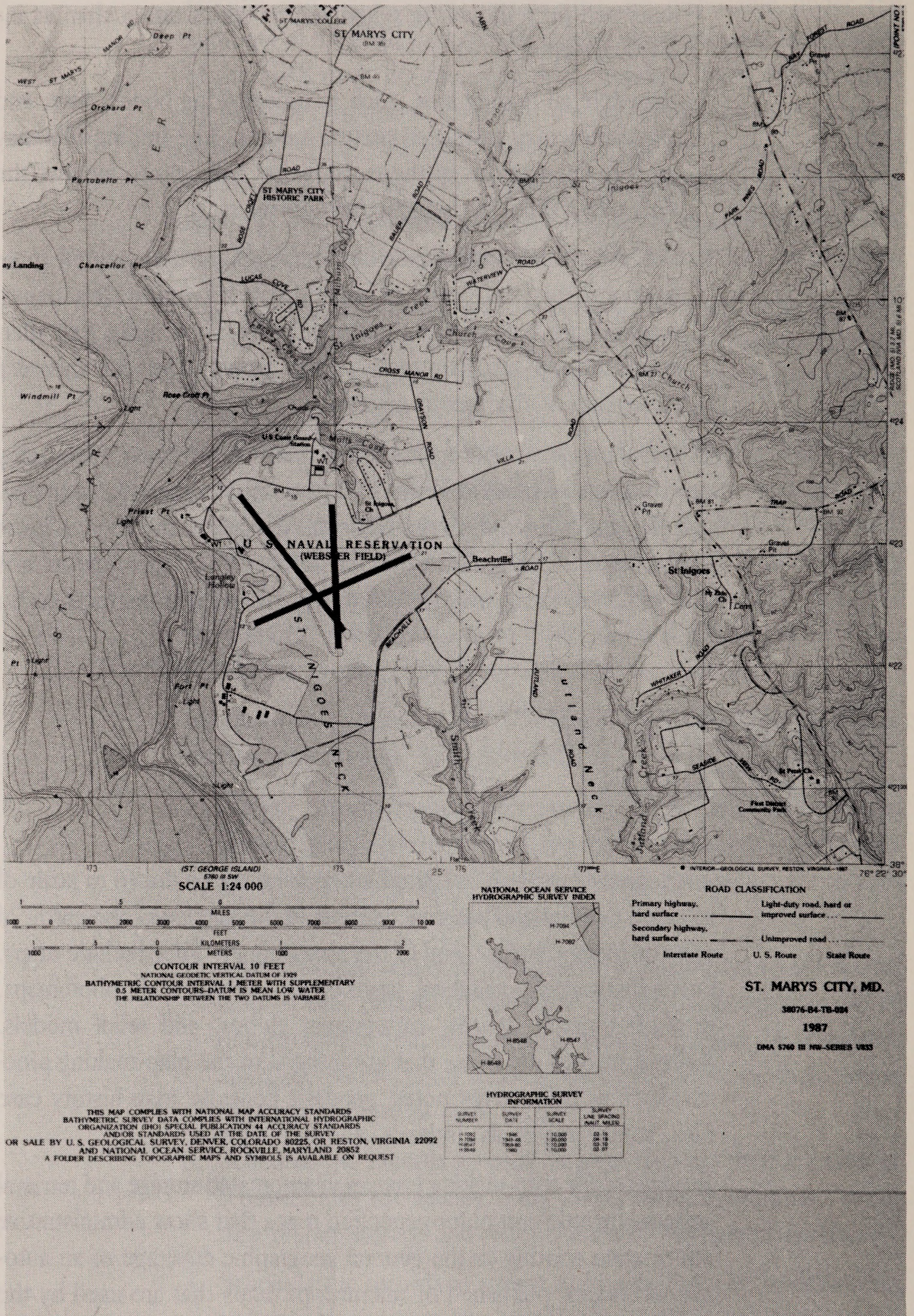
5. Schedule all finding aids, such as indexes, log books, lists, and cross-references to related textual records. The finding aids may provide descriptions of the records that will help to identify the series and simplify the scheduling process.
6. Schedule records maintained by contractors. As agencies rely more frequently on contractors to provide services and to store record materials for reproduction purposes, they must make sure that, when appropriate, contracts clearly specify the government's ownership of the record materials.

To transfer permanent records to the National Archives, the agency must submit a Standard Form 258: Request for Transfer, Approval, and Receipt of Records to the National Archives of the United States for each series being transferred. NARA reviews, signs, and returns the SF 258 to the agency with shipping and delivery instructions for the records.

CARTOGRAPHIC RECORDS

Cartographic records are graphic representations drawn to scale of selected cultural and physical features of the surface of the earth, of other planetary bodies, and of the atmosphere. They include maps, charts (hydrographic/nautical, weather, and aeronautical), photomaps, orthophotomaps, atlases, cartograms, globes, and relief models. Related records are those that are integral to the map-making process, such as field survey notes, geodetic controls, map history case files, source materials, indexes, and finding aids.

Records of the map-making process in automated storage and retrieval systems include computer-generated maps that show administrative information relating to the general geographic coverage of an automated system, published or manuscript maps that are used by the agency to input geographic information into an automated system, and hard-copy printouts or microfilm outputs of computer-plotted



Quadrangle Map of St. Mary's City, MD. Filed as: RG 57, 7.5 minute series, Maryland, St. Mary's City, 1987.

maps. Records in these automated systems must be handled like other electronic records as discussed in the NARA Instructional Guide: "Managing Electronic Records." The disposition of these systems must be established on a case by case basis in consultation with the National Archives.

The term "map" is used generically to mean maps, charts, cartograms, and atlases. The word "published" as used in these instructions refers to maps or charts that have been printed, photographed, or reproduced in multiple copies whether for limited or general distribution. These may be in single-sheet or bound form.

Permanent Cartographic Records

The following series of maps are most likely to have enduring historical value and should be scheduled for retention in the National Archives of the United States. These descriptions are not meant to be incorporated verbatim into an agency's schedule, but should serve as guides to the types of records that have permanent value. Each agency will need to adapt the descriptions to fit its own programs.

Manuscript and annotated maps: Hand-drawn maps (generally in pencil, ink, or colors on paper or tracing cloth); maps made with adhesive types of shading, symbols, or lettering; and maps that bear significant manuscript annotations, changes, or additions are of historic value. Included are maps that have been compiled in the office for administrative use, for research, or for exhibits and wall displays; map enclosures to reports or correspondence; original topographic plane table sheets, terrain sketches, and nautical depth-sounding sheets derived from field observations and surveys; final manuscript smooth sheets and fair sheets that show survey results; maps or aerial photographic prints annotated with field survey information; initial hand-drawn photogrammetric stereoplottings from aerial photographs; and proof sheets or overlays that bear annotations resulting from field checking or verification of survey data or that are annotated to show the sources of information used on the map.

Published maps: One copy of each published map, atlas, portfolio, and photomap produced by an agency, including edition and variant, and all related indexes (in map or other form) should be retained.

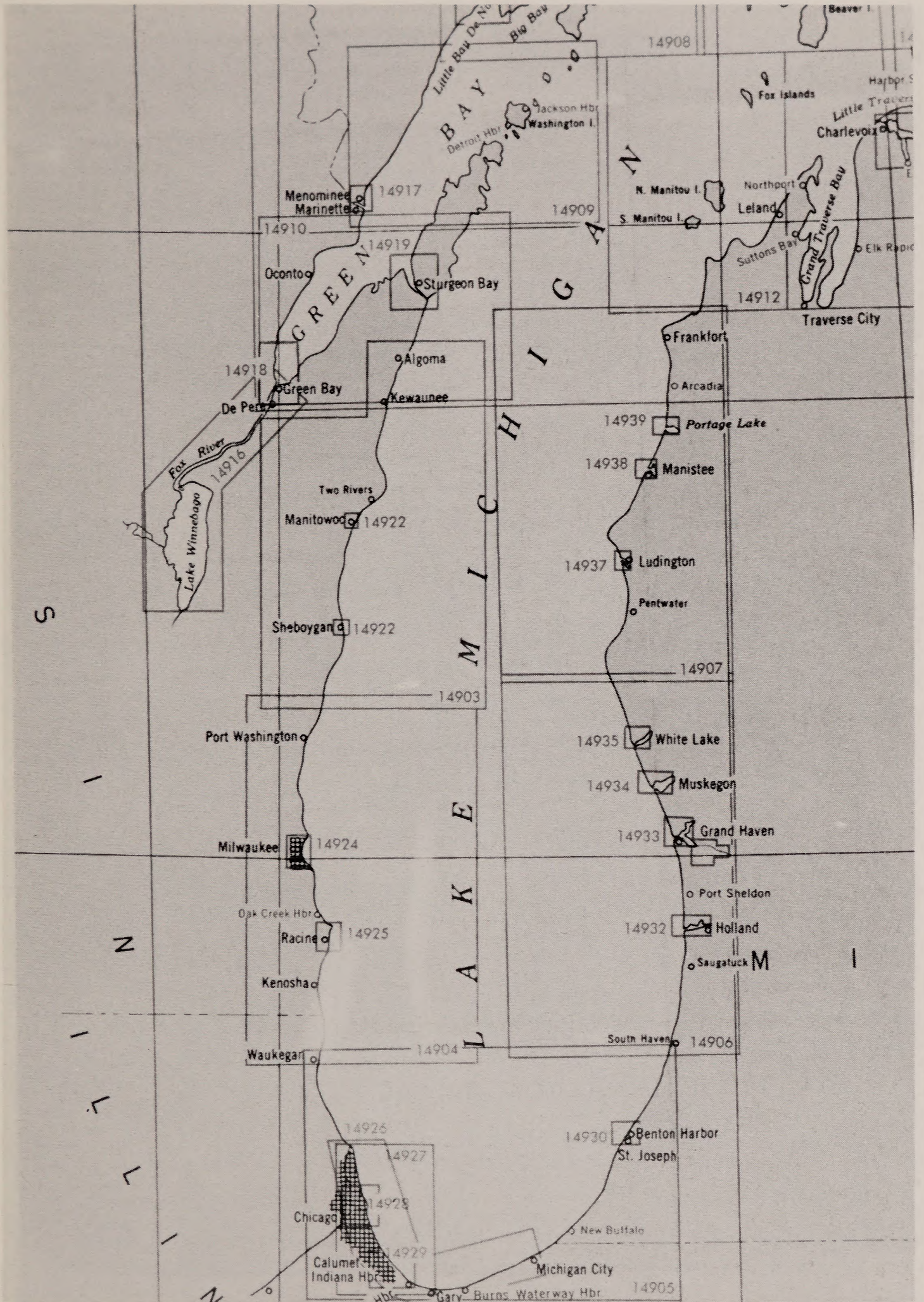
Map history case files and source materials: These records include files that chronologically document the planning, surveying, field work, and production and revision of specific maps and files that contain or describe the sources of information for specific maps, including map specifications, location diagrams, notes kept by the cartographers who made the maps, maps or photographs from which information was abstracted, correspondence, reports, bibliographies, lists of sources, and papers that show the origin and spelling of place names.

Maps on microfilm: If both original hard-copy maps and microfilm copies exist, use the same disposition for both formats. For example, if a hard-copy map is permanent, schedule the microfilm copy for permanent retention, too. NARA may authorize the substitution of microforms for maps if the film, processing, and storage meet the standards prescribed in 36 CFR 1230, and if the reduction ratio guarantees legibility. Original maps may not be destroyed without NARA's approval. Microfilm can never be substituted for color-keyed maps.

Globes, terrain models, and raised relief maps: Records include globes, three-dimensional terrain models, and raised relief maps made of plaster, wood, plastic, or other materials. Globes are often unique and valuable items of cartographic expression and as such they may have enduring value. One sample of each of these items produced or accumulated by an agency in the course of its official business should be designated the archival copy and permanently preserved.

Finding aids: Graphic indexes are maps that contain lines, symbols, or colors designed to show the geographic coverage or status of each item in a series or multiple set of map records. Other finding aids include written map lists, box lists, card-file indexes, and magnetic tape or other electronically stored information.

Survey field notes, geodetic controls, and computations: Field notes from surveys, observations, and explorations (which may offer a running account of the terrain crossed, geological notes, a record of water



Index for National Oceanic and Atmospheric Administration (NOAA) Nautical Charts. Filed as: RG370, Indexes, Great Lakes Catalog.

E. L. Hornum 20.

5852

SURVEY OF THE
MISSISSIPPI RIVER

MADE UNDER THE DIRECTION OF THE
MISSISSIPPI RIVER COMMISSION.

PRECISE LEVELS.

No. 5852

_____ Chief of Party?

_____ Leveler.

LOCALITY.

190

Mississippi River Commission Field Notebook. Filed as: RG77, Mississippi River Commission, Field Notebook Number 5851.

depths, and a daily log or journal) often recorded in pocket-size notebooks carried by the observer; triangulation diagrams; aerial photographs annotated with geodetic control data; and survey computations may have enduring historical value. Survey notes in electronic form may also be permanently valuable and must be scheduled as described in the NARA Instructional Guide "Managing Electronic Records."

Examples of the types of cartographic records that NARA considers permanent and has accessioned include the Army Corps of Engineers' manuscript and printed maps of military campaigns in the Seminole, Mexican, and Civil Wars; navigational charts from the National Ocean Service (formerly the Coast and Geodetic Survey); topographic quadrangle maps, which form the basis of the national map of the United States from the Geological Survey; manuscript plats and printed state maps from the Bureau of Land Management (formerly the General Land Office); maps of Indian reservations from the Bureau of Indian Affairs; maps of overseas military expeditions in World Wars I and II from the Department of Defense; U.S. Naval Operating Forces Caribbean ship-movement report charts during the Bay of Pigs invasion and the Cuban Missile Crisis; and current topographic maps and nautical charts from the Defense Mapping Agency.

AERIAL PHOTOGRAPHY

The term aerial photography as used in these instructions means visual images of the surface of the earth, of other planetary bodies, or of the atmosphere that have been taken from airborne vehicles for the purpose of evaluating, measuring, or mapping the cultural and physical features of the landscape or the sky and related tabular and graphic indexes necessary for the proper identification and retrieval of these records. Conventional aerial photographs taken from aircraft produce direct film images from cameras. Remote sensing imagery, such as that from orbiting satellites, which requires conversion or alteration of sensor data from digital, electronic, or computerized forms

to photographic or videographic images must be scheduled for disposition on a case by case basis as indicated for electronic cartographic systems.

Permanent Aerial Photographic Records

The following series of aerial photographs may have enduring historical value and should be scheduled for archival retention.

Vertical and oblique aerial film, conventional aircraft: These records consist of vertical and oblique film in black and white, color, or false color, including finding aids such as photo indexes (controlled or uncontrolled mosaics), flight line indexes, and coordinate grid systems. Vertical aerial film consists of images that are exposed with the optical axis of the camera approximately perpendicular to the earth's surface and with the film image as nearly horizontal as practicable. Oblique aerial film consists of images that are made with the camera axis directed between the horizontal and the vertical. Oblique photography is generally used for reconnaissance purposes. Because oblique reconnaissance photography may be repetitive, it is often possible to select representative samples rather than retain the full coverage of particular conditions, events, or phenomena. Representative samples may be selected if NARA approves. Records that must be transferred to NARA include original or master negatives, annotated copy negatives, internegatives, rectified negatives, glass-plate negatives, annotated prints, and prints for which no negatives exist. The National Archives has major aerial photographic holdings from the records of the Department of Agriculture and the Defense Intelligence Agency.

Infrared, ultraviolet, multispectral (multiband), video, imagery radar, and related data tapes, converted to film base: These sensor systems provide photographic imagery, sometimes after the information has been converted or transferred from raw data. The film is considered to be the primary record. The original or master negative, annotated prints, and prints for which no negatives exist should be scheduled for archival retention.



Aerial Photograph of Sheridan, WY. Filed as: RG 95, Symbol O, Roll 12, exposure 102, Can 2365.

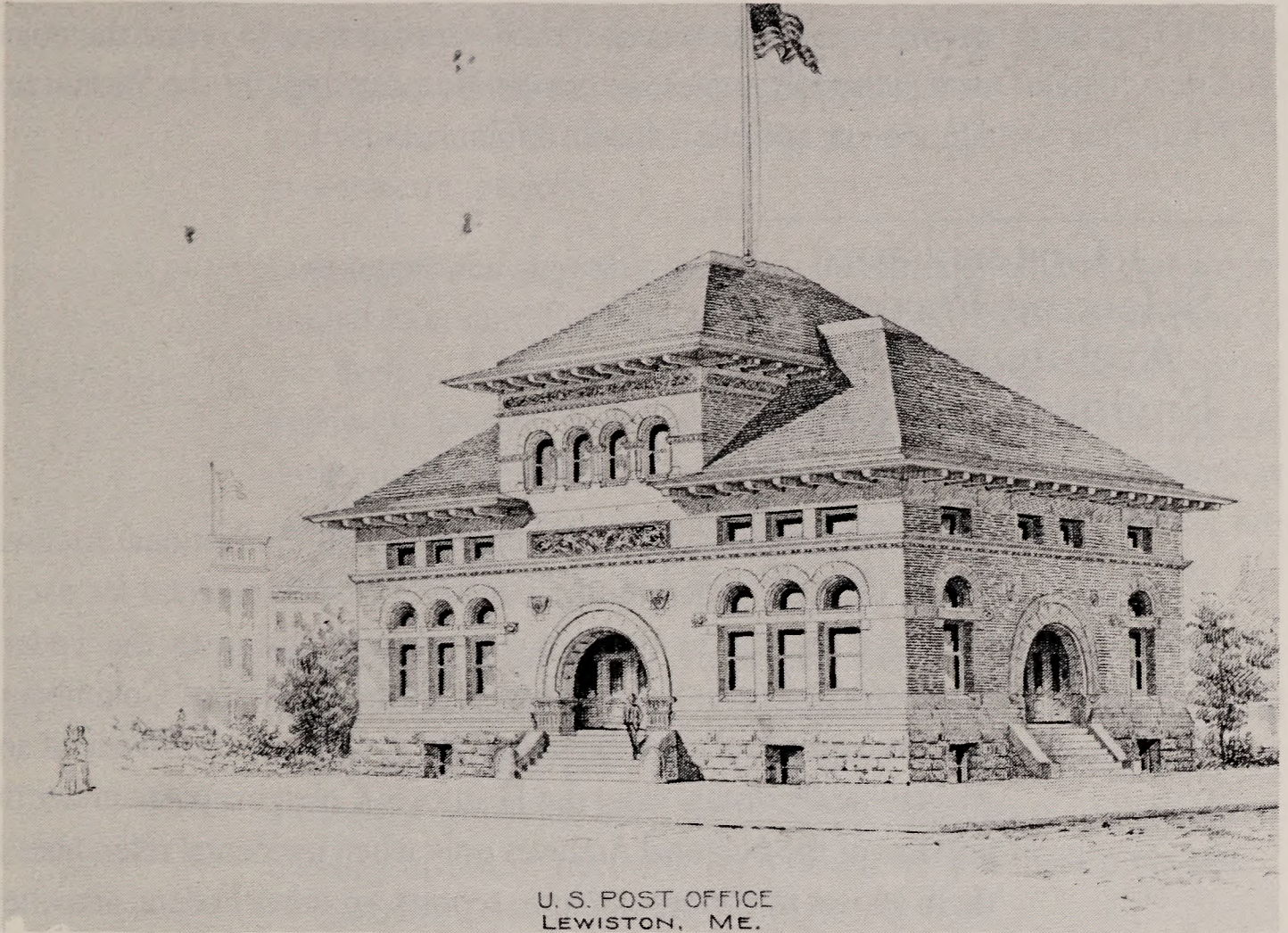
ARCHITECTURAL AND ENGINEERING RECORDS

Architectural and engineering drawings, also known as design and construction drawings, are graphic records that depict the proposed and the actual construction of stationary structures, such as buildings, bridges, and canals, and movable objects, such as ships, aircraft, vehicles, weapons, machinery, and equipment. Closely related records such as indexes and written specifications frequently accompany the drawings.

These records should be permanently preserved if the structures and objects depicted are in Federal use and are of importance to the creating agency or are otherwise considered historically, architecturally, or technologically significant. For buildings or objects that are deemed to be sufficiently significant to document, only certain types of drawings are worthy of permanent preservation. Other drawings may be scheduled for eventual destruction. The aim of the selection process is to retain drawings that may be of value to researchers interested in social and governmental history, in the history of science and technology, in the history of architecture, and in historic preservation.

The selection of buildings or objects that are significant and the selection of drawings that are worthy of permanent retention should be made by agency personnel who are knowledgeable about the history and use of the structures in consultation with the National Archives. Helpful criteria for the selection of significant structures and their drawings are noted below.

Drawings that were used during the design and construction of a building or during the research and development of an object may be of value to the originating agency for repair and maintenance while the building or object is still used, maintained, or owned by the Federal Government. When buildings or objects have been in use for a long time, original architectural and engineering drawings that are more than 50 years old should be microfilmed or otherwise duplicated for continued agency use. To avoid deterioration, original drawings that



Drawing of Post Office, Lewiston, ME. Filed as: RG 121, Lewiston, ME, Post Office Number 61.

meet the criteria for permanent retention should be retired and transferred to the National Archives.

Original drawings or tracings and blueprints or photocopies that have been annotated by hand to show significant additional information are unique and should be scheduled as permanent. If the only existing documents are blueprints, one blueprint should be designated the record copy. Duplicate copies of clean, unannotated blueprints are disposable.

One published or printed copy of each drawing should be scheduled for permanent retention. Published drawings may be bound together in volumes or booklets. If published drawings are the only existing documentation, one copy should be designated the record copy and scheduled for permanent retention. Duplicate published drawings are disposable.

Design proposals for buildings or objects should be scheduled for

permanent retention even if they were not used to create the object or building. Examples are competition drawings for the Washington Monument and the Lincoln Memorial.

Criteria for Selecting Permanent Architectural and Engineering Records

Architectural drawings should be retained in the National Archives if they depict a structure that has been used or planned for use by a Federal agency, or that has a close relationship to the Federal Government because of its location in the District of Columbia or the immediate environs. Buildings that are entirely non-Federal and geographically distant from the District of Columbia come under the purview of the National Archives only when incidental references to them appear in correspondence, reports, or other Federal activities. Federal financing of a building's construction or the development of approved standards for construction do not alone constitute sufficient reason to preserve the architectural drawings of such a structure in the National Archives.

Engineering drawings are appropriate for retention in the National Archives primarily if the object depicted was intended for use by the Federal Government or was issued a patent by the U.S. Patent and Trademark Office. Objects for which a Federal agency has set standards, approved drawings, and received drawings during the course of official business need to be further analyzed to determine their significance to the history of science and technology.

Criteria for Identifying Significant Buildings or Objects

Major agency activities: Buildings and objects that have been used or constructed by a Federal agency for a major activity of the agency. Examples include Veterans' Administration hospitals; Public Buildings

Service post offices, customs houses, and courthouses; Defense Department forts, air bases, shore facilities, ships, aircraft, weapons, and vehicles; Coast Guard lighthouses; NASA spacecraft; and TVA hydroelectric projects.

Long-lasting and important structures: Buildings or objects that are intended to endure for many years and are critical to the mission of the agency. For example, on a naval base, large administrative buildings, hangars, docks, ship-repair facilities, and vessels are enduring and important structures; temporary sheds, garages, comfort stations, parking lots, electrical lines, sewer lines, and plans for furniture arrangement do not have lasting historical importance.

Standard or typical design: An original design used as the basis for similar buildings or objects, any significant variations on the standard design, or a representative building or object from a larger group. Once a standard design has been documented, drawings of each duplicate building or object need not be retained for historical purposes.

Architectural style: Buildings that illustrate the characteristics of either a given period or a regional architectural style.

Innovations and prototypes: Buildings or objects that are unique or that were the first of their kind; experimental public housing or community planning projects established by the Federal Government as prototypes or models; the earliest examples of new or experimental types of bridges, dams, ships, aircraft, pieces of machinery, vehicles, weapons, articles of furniture, etc., or those that have had an impact on the history of science and technology. Examples include items patented by the U.S. Patent and Trademark Office.

National events or personalities: Buildings or objects that are associated with events or persons of national significance. Examples include the Supreme Court building, a building where a major treaty was signed, the first rocket to the moon, and the Sherman tank of World War II.

Noted architects, engineers, or scientists: Buildings or objects designed by famous people.

Controversy: Buildings or objects that were involved in public controversy regarding their design, construction, or utilization.

Selected for preservation by national organizations: Structures that have been placed on the National Register of Historic Places or that have been listed by the Historic American Building Survey (HABS) or the Historic American Engineering Record (HAER).

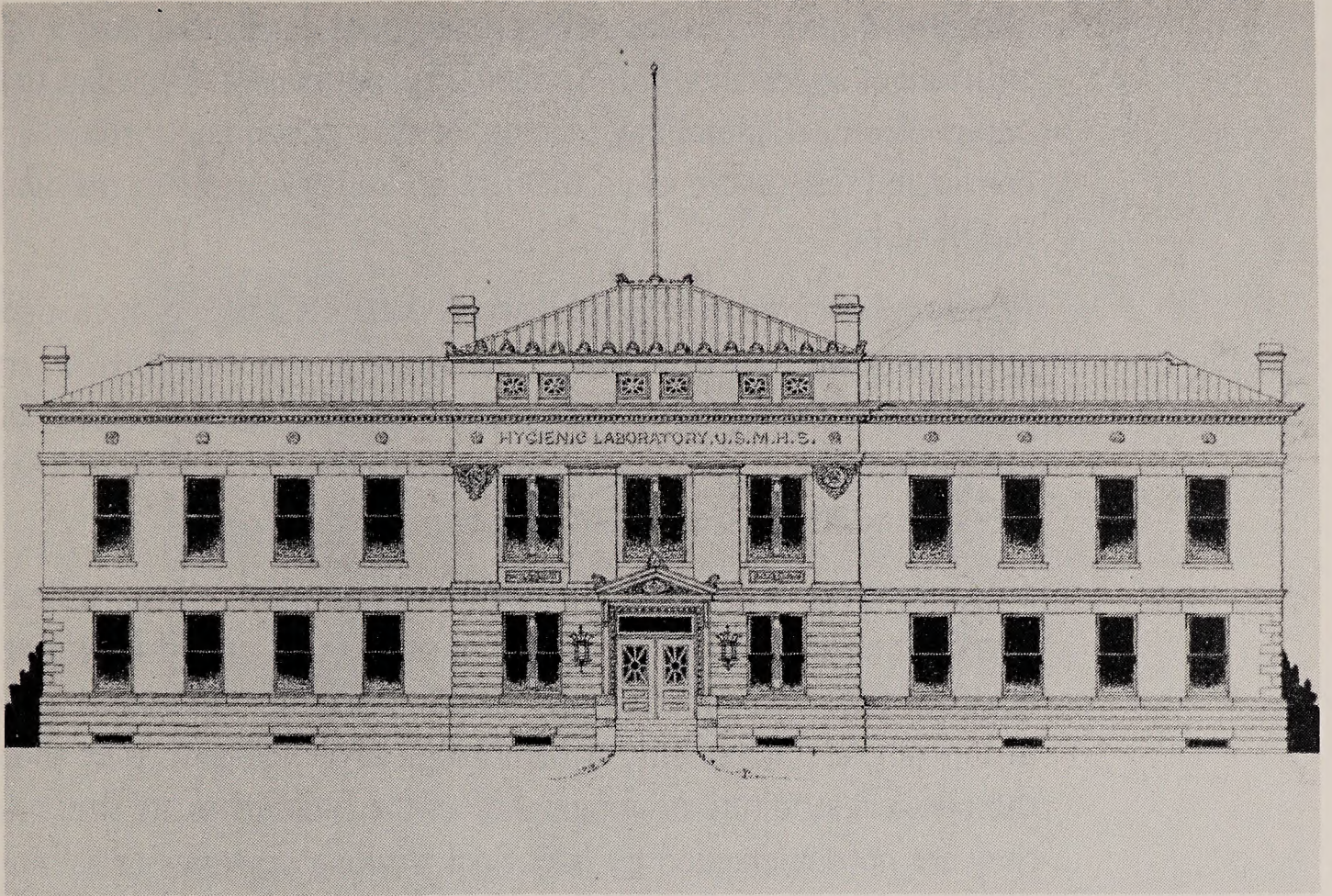
Once the significance of a building or object and its relationship to the Federal Government have been established, the selection of the drawings to be scheduled for permanent archival retention can be made according to the descriptions listed below. The following descriptions are not to be incorporated verbatim into an agency's schedule, but are to serve as guides to the types of records that are likely to have enduring value and that should be scheduled for permanent retention. Each agency will need to adapt the descriptions to fit its own programs.

Permanent Architectural Drawings of Stationary Buildings and Structures

Preliminary design drawings: Drawings and sketches that are conceptual and are part of the design phase rather than of the actual construction. These are typically freehand studies that show the basic design, including the arrangement of rooms, the general appearance of elevations, and the floor plans.

Presentation drawings and perspective views: Pictorial design drawings, such as color renderings and perspective views of the proposed building or project. These drawings are frequently of great interest to architectural historians because of their aesthetic appeal.

Final working drawings and as-built drawings: Master tracings or reproducibles that show the details of construction, including "as-built" drawings that show any changes from the original design that were made as construction proceeded. These records are of great documentary importance because they show the building as it actually appeared. In some files, the as-built drawings are interfiled with final working drawings, or have replaced the final working drawings. Plans of permanent value include site and landscaping, floor plans, interior and exterior elevations, sections, and ornamental and structural plans. Final working drawings and as-built drawings of electrical, plumbing, heating, and air-conditioning systems are considered disposable when they are no longer needed to maintain the building, provided



Plan of Marine Hospital, Baltimore, MD. Filed as: RG 121, Baltimore Marine Hospital, Number 4.

that they can be easily separated from the permanent records. Intermediate or prefinal working drawings are disposable if they are superseded by final or as-built drawings.

Artistic drawings: All artistically rendered drawings, watercolors, and similar original artwork, or a representative sample from a file of such artwork, and drawings that show the decorative parts of buildings such as sculpture; terra cotta; ironwork; stonework; furniture, lamp, and door designs; stained-glass windows; and surface paint decorations should be permanently saved.

Shop drawings: Detailed drawings of parts of the building prepared by construction contractors or subcontractors; drawings by manufacturers of products that require assembly; and drawings of architectural embellishments and interior-design elements such as tile and marble work, special cabinetry, and important mechanical parts such as elevators are permanent. Shop drawings that pertain to electrical, plumbing, heating, or air-conditioning systems are disposable when they are no longer needed to maintain the building.

Standard drawings: Final drawings of standard details that depict the structure or appearance of the building are permanent. Drawings that depict electrical, plumbing, heating, or air-conditioning systems are considered disposable when they are no longer needed to maintain the building.

Repair and alteration drawings: Drawings that depict repairs or changes in the structure or appearance of the building after construction are permanent. Repair and alteration drawings that relate to electrical, plumbing, heating, or air-conditioning systems are disposable when they are no longer needed to maintain the building.

Selected contract negotiation drawings: Drawings on which contract negotiations are based are considered permanent only if they meet all of the following criteria: they relate to buildings considered to be historically, architecturally, or technologically significant; they show the physical structure or appearance of the building or its site; and they are not superseded by later final working drawings or as-built drawings. Drawings selected for permanent retention should be separated from accompanying contractual papers, which are disposable under General Records Schedule 3, entry 4.

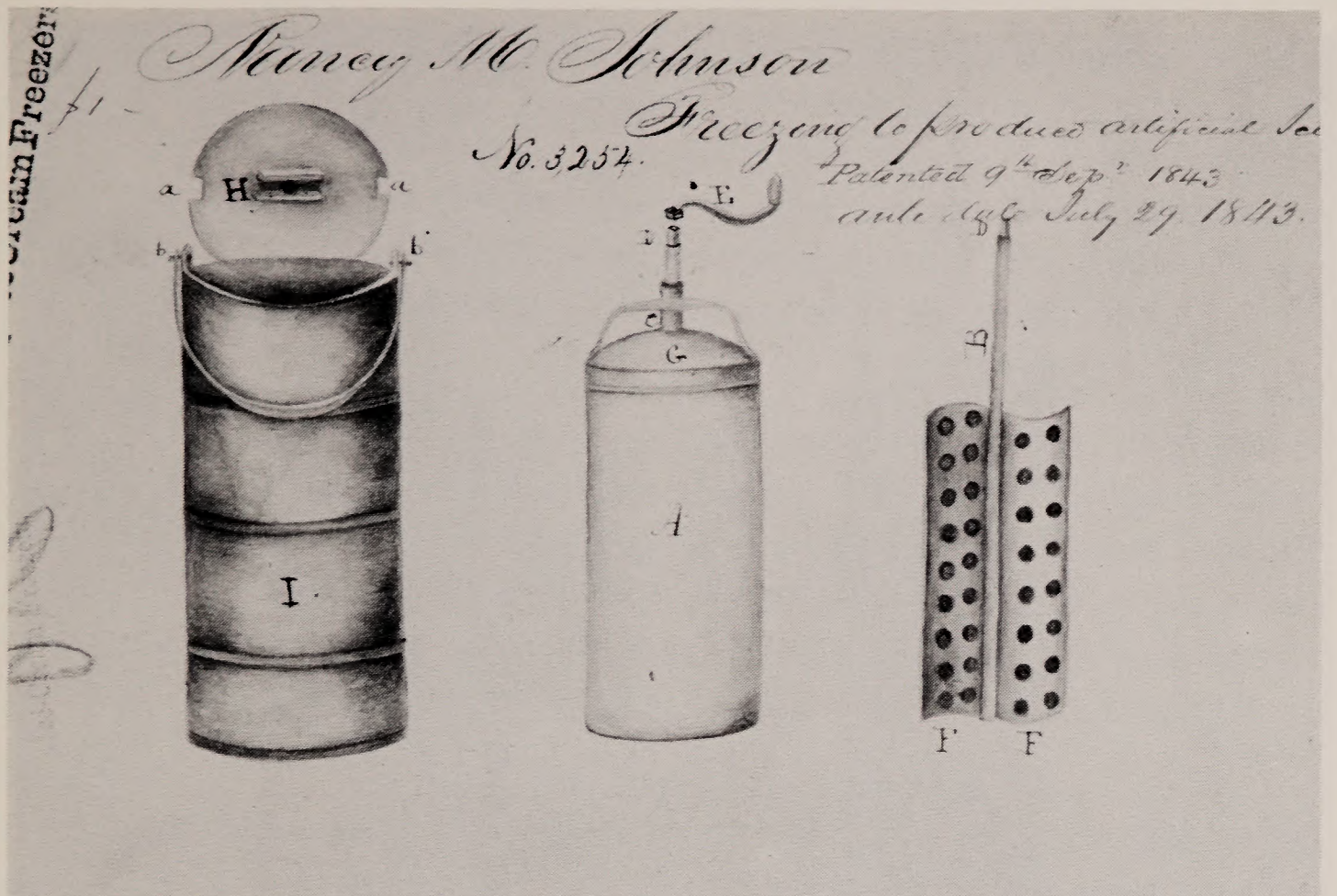
Measured drawings of existing buildings: Precise drawings that have been made of existing historical structures.

Project specifications: Written guides to the material requirements shown on the drawings comprise the specifications. One copy of the specifications that relate to the structure or appearance of the building is permanent. The specifications that relate to electrical, plumbing, heating, or air-conditioning systems are disposable when they are no longer needed to maintain the building.

Permanent Engineering Drawings of Movable Objects or Pieces of Equipment

Preliminary design drawings: Drawings that show the object as designed but prior to its production are important in documenting the object's development. One copy each of the original design and of any later important variations is permanent.

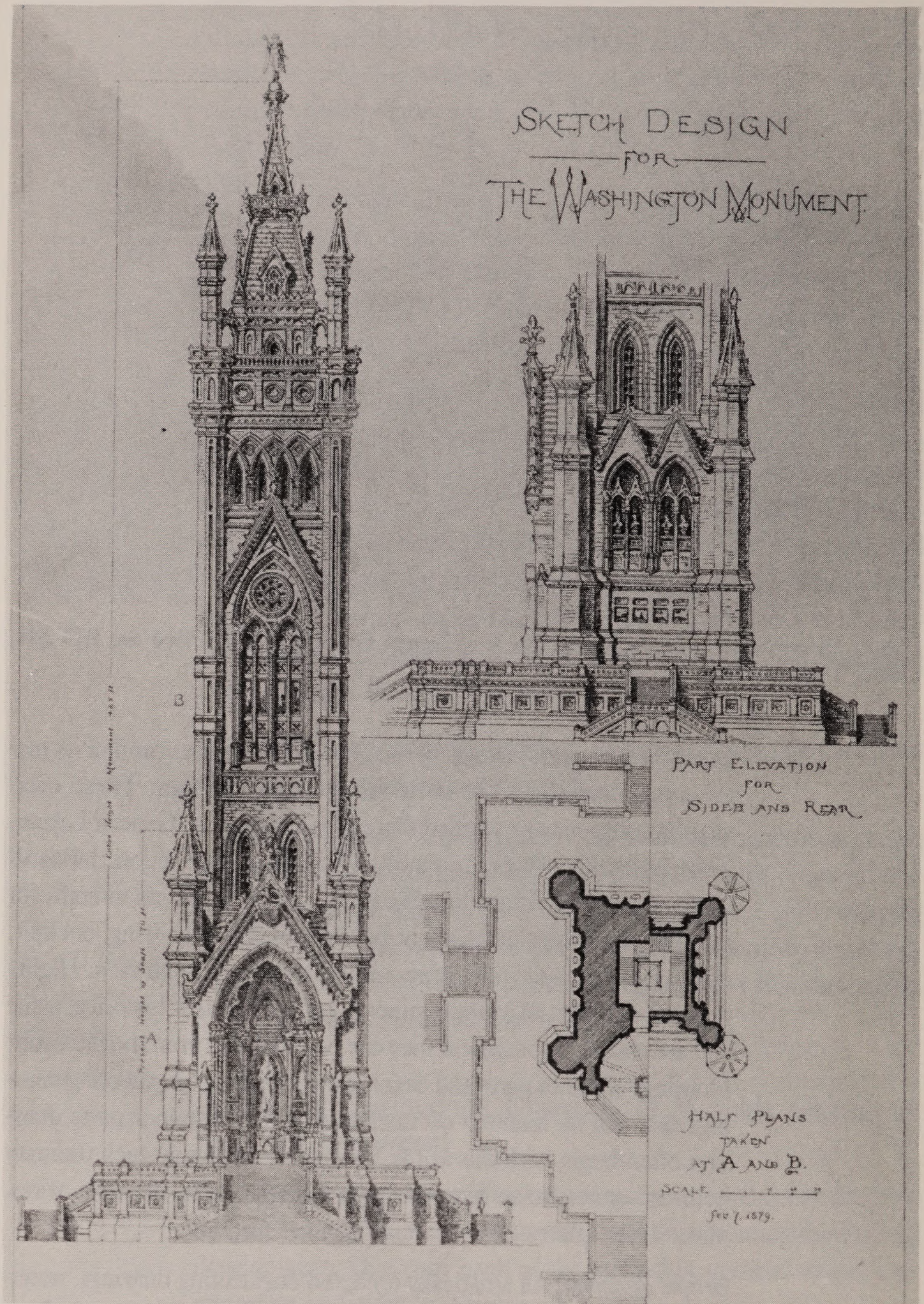
Final or as-built drawings: Drawings that show the object as it was finally constructed or approved.



Patent Drawing for Nancy Johnson's Ice Cream Freezer, 1843. Filed as: RG 241, Utility Patents, 3254.

General drawings: Drawings of the object in its entirety and of its major components have the most value to the historian. These overview drawings may be entitled General Arrangement, General Layout, Final Assembly, Major Assembly, Plan-Elevation-Section, Inboard/Outboard Profile, Front/Side/Rear/Top View, etc. In an aircraft, for example, the major parts might be the tail assembly, wing, cockpit, engine, landing gear, pilot seat, instruments, and bomb rack. Highly detailed drawings of routine minor parts are of lesser historical value and are usually disposable if they can be separated from the file easily. Drawings of minor parts and details are examples of engineering drawings that can be retained on microfilm. Titles of minor parts drawings often begin with the words "details of" and show such ordinary items as screws, bolts, fasteners, pipe fittings, braces, brackets, wires, pins, struts, plates, and beams.

Artistic drawings: All artistically rendered engineering drawings, watercolors, and similar artwork, or at least a representative sample from a file of such artwork, and drawings that show decorative objects or artistic designs are permanent.



Drawing of Proposed Design for the Washington Monument, 1879. Filed as: RG42, Washington Monument Associated Papers, Number 12.

The National Archives usually does not accession architectural models or other three-dimensional representations with the exception of selected relief maps and globes. Models should be scheduled for disposal with the understanding that they may be offered for donation to an eligible person, organization, institution, corporation, or government under the provisions of 36 CFR 1228.74(c).

NARA may authorize the substitution of microfilm for architectural and engineering drawings if the film, processing, and storage meet the standards prescribed in 36 CFR 1230, and if the reduction ratio guarantees legibility and mathematical accuracy. Original drawings may not be destroyed without NARA's approval. Examples of the successful substitution of microfilm for original drawings include large-scale engineering drawings composed of black lines on tracing linen that remain legible when greatly reduced in size.

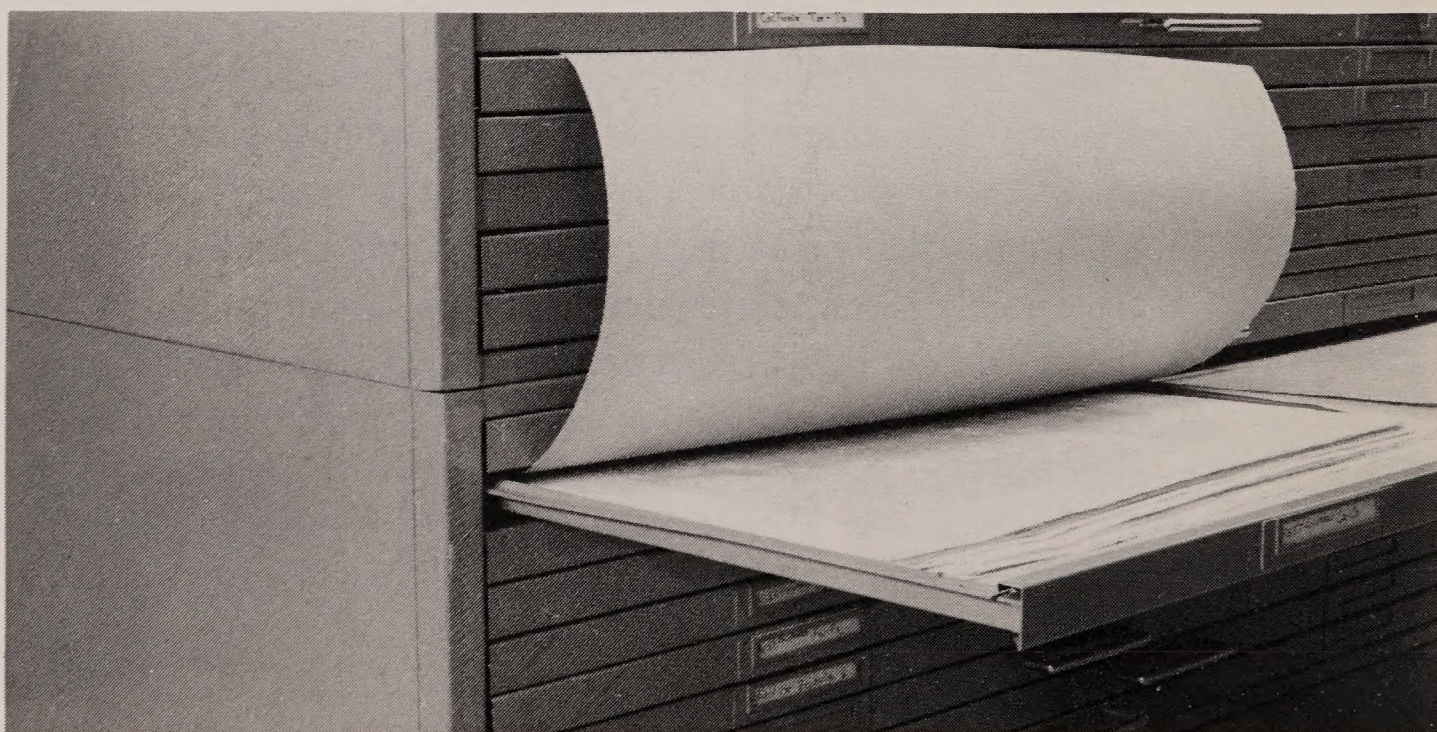
Never substitute microfilm for color renderings or drawings, or for final working or as-built drawings of buildings with major historical or architectural significance, such as those that have been selected, or may be listed, by the National Register of Historic Places and similar organizations. Microfilm may be used for reference purposes, but it should not be considered the permanent record copy. Microfilm is advised for extensive repetitive files, or for records of buildings of lesser importance, particularly those with similar or repetitive designs or those without potential historical or architectural renown.

Original architectural and engineering drawings that NARA has accessioned include Army Corps of Engineers and Quartermaster Corps fort and construction project plans; Navy ship and aircraft plans; Navy and Army ordnance and equipment drawings; Public Buildings Service drawings of Federal courthouses, post offices, customs houses, and mints; National Park Service designs for public monuments; Coast Guard lighthouse plans; and original 19th-century patent drawings from the U.S. Patent and Trademark Office.

RECOMMENDED MAINTENANCE

Cartographic, architectural, and aerial photographic records require special storage and handling because of their diverse physical attributes. Effective management of the records requires recognition of their distinct characteristics and the application of a few basic management principles.

1. Create an identification scheme for each series and assign unique identification designations to each item within a series.
2. Maintain lists or indexes for each series with cross-references to related textual records.
3. Avoid interfiling separate series of maps, charts, or drawings, and file permanent cartographic and architectural records separately from disposable series. However, if hand-corrected editions have been systematically filed with other published maps in a central or master file, do not break up the file by removing hand-corrected copies; the file should be maintained in its original order.
4. Avoid storing maps and drawings rolled or folded. NARA recommends storing maps and architectural drawings flat in shallow drawer (1- or 2-inch) map cases and placing the records inside



Ten-Drawer Map Cases in the Cartographic and Architectural Branch, National Archives.

AC/AS INTELLIGENCE FORM AFIPH-20
PHOTOGRAPHIC DIVISION

LTR. NO. 4875 DATE 22 July 1940

MISSION

18 Sqdn/Miss 128 Hawaiian Islands
VV 1-83 OF
18 Sqdn/Miss 129 Hawaiian Islands
VV 1-105 OF
18 Sqdn/Miss 156 Hawaiian Islands
VV 1-21 OF
18 Sqdn/Miss 157 Hawaiian Islands
VV 1-88 OF
18 Sqdn/Miss 158 Hawaiian Islands
VV 1-76 OF

UNCLASSIFIED

CLASSIFICATION

DEC 15 1958

MAY 1 1957

9233
A

Aerial-Film-Can Label. Filed as: RG 373, Can A 9233.

acid-free folders for added protection. The FRCs are generally not equipped to handle flat storage of large documents, therefore maps and drawings must be rolled, not folded, for storage in the FRC. For this reason, it is preferable, when feasible, to transfer permanent cartographic and architectural records directly to NARA rather than to intermediate storage in the FRC.

5. Do not laminate oversize records. The process is difficult to reverse without damage to the records and has been replaced by other preservation, storage, and treatment options. Encapsulate old or fragile maps in clear, stable plastic.
6. Store large, heavy atlases and other bound volumes of maps or drawings flat, preferably on roller shelves to facilitate moving them without damage. Storing the volumes upright strains their bindings. If a spine is weak or damaged, the binding can be removed, the pages deacidified and encapsulated, and the volume reassembled in post binders. Further information about how to deal with preservation problems is available from the National Archives Document Preservation Branch at (202) 523-3300.
7. Store negative rolls of aerial film in inert plastic containers upright on shelves with identification codes assigned to each roll of film (see illustration).

8. Wear white cotton gloves to handle film.
9. Store film in a climate-controlled environment at constant temperature and humidity, ideally between 60 and 70 degrees Fahrenheit and between 40 and 50 percent relative humidity.
10. Convert nitrate-base film to safety base as described in 36 CFR 1232.4(b).

Detailed suggestions for the storage of cartographic and architectural records are available in "Archives & Manuscripts: Maps and Architectural Drawings" by Ralph Ehrenberg, Society of American Archivists Basic Manual Series, Chicago, 1982.

FOR MORE INFORMATION

If you have a question about any information in this pamphlet, or if you have other questions that relate to records management, contact your agency records officer or call the NARA offices listed below.

- Agency Services Division, Records Administration Information Center, (202-724-1471), to inquire about the management of records and about training in the scheduling and disposition of records.
- Records Appraisal and Disposition Division, (202-724-1457), to inquire about disposition, including the use of the SF 115 and the General Records Schedules.
- Office of Federal Records Centers, (202-653-8388), to inquire about Federal records center storage of cartographic and architectural records.

APPENDIX A: DISPOSABLE RECORDS

General Records Schedule 17: Cartographic, Aerial Photographic, Architectural, and Engineering Records

Federal agencies create or receive cartographic, aerial photographic, architectural, and engineering design records in connection with their official activities. Many of these records have continuing historical value after they are no longer being used by the agency. Descriptions of both the historically valuable and the disposable records were formerly included in General Records Schedule 17, Cartographic, Remote Sensing Imagery, and Related Records, and in General Records Schedule 22, Design and Construction Drawings and Related Records. The General Records Schedules have been revised to cover only disposable records. Guidelines for identifying and scheduling the records of continuing value are now provided in "Managing Cartographic and Architectural Records: An Instructional Guide." The Guide must be used in conjunction with the General Records Schedule to insure proper disposition of all cartographic, aerial photographic, architectural, and engineering design records held by an agency.

This schedule relates to cartographic records prepared during intermediate stages of publication, unannotated aerial photographic negatives and prints, and architectural and engineering drawings. Cartographic and aerial photographic records created before January 1, 1950, and architectural or engineering drawings created before January 1, 1921, must be brought to the attention of the National Archives before applying the disposition instructions in this schedule.

ITEM

NO. DESCRIPTION OF RECORDS

AUTHORIZED DISPOSITION

1. *Cartographic Records Prepared During Intermediate Stages of Publication.*

Scribed plastic sheets, color separation sheets, composites prepared as a step in the making of color separation sheets, photographic negatives, glass-plate negatives, enlargements or reductions, color pulls, proof

Destroy when no longer needed for revision.

copies subject to final revision, "correction file" maps annotated to show corrections to be incorporated into the next edition of the published map, and similar items whose informational content is duplicated by the final published map.

2. *Vertical and Oblique Aerial Photography.*

Vertical and oblique film in black and white, color, or "false color," including related photo indexes (controlled or uncontrolled mosaics), flight line indexes, or coordinate grid systems used as finding aids.

- | | |
|---|---|
| a. <i>Unannotated</i> duplicate copy negatives, internegatives, rectified negatives, and glass-plate negatives. | Destroy when no longer needed for agency use. |
| b. <i>Unannotated</i> prints when original film negatives exist. | Destroy when no longer needed for agency use. |

[NOTE: The term aerial photography means visual images of the surface of the earth, of other planetary bodies, or of the atmosphere taken from airborne vehicles for the purpose of evaluating, measuring, or mapping the cultural and physical features of the landscape or sky, and related tabular and graphic indexes necessary for the proper identification and retrieval of these records. Conventional aerial photographs taken from aircraft produce direct film images from cameras. Other remote sensing imagery, such as that from orbiting satellites, which requires conversion or alteration of sensor data from digital, electronic, or computerized form to photographic or videographic images must be scheduled for disposition on a case by case basis.]

3. *Architectural Drawings of Temporary Structures and Buildings or of Buildings Not Critical to the Mission of the Agency.*

Drawings of structures and buildings such as telephone and electric lines, storage sheds, parking lots, and comfort stations.	Destroy when no longer needed for administrative purposes.
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4. <i>Drawings of Electrical, Plumbing, Heating, or Air-Conditioning Systems.</i>	Destroy when no longer needed for administrative purposes.
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5. *Contract Negotiation Drawings.*

Drawings prepared during contract negotiation for buildings or objects lacking histor-	Destroy when no longer needed for administrative purposes.
--	--

ical, architectural, or technological significance; drawings related to electrical, plumbing, heating, or air-conditioning projects; or drawings superseded by final working/as-built drawings.

6. *Space Assignment Plans.*

Outline floor plans indicating occupancy of a building.

Destroy when no longer needed for administrative purposes.

7. *Architectural Models.*

Models prepared for illustrative or presentation purposes.

Dispose of when no longer needed for administrative purposes.

[NOTE: These models may be offered for donation to museums or similar organizations after approval by NARA under the provisions of 36 CFR 1228.74(c).]

8. *Engineering Drawings of Routine Minor Parts.*

Drawings of such objects as fasteners, nuts, bolts, wires, screws, nails, pipe fittings, brackets, struts, plates, and beams, if maintained separately or if segregable from a larger file.

Destroy when no longer needed for administrative purposes.

9. *Drawings Reflecting Minor Modifications.*

Repetitive engineering drawings showing minor modifications made during research and development, and superseded by final drawings, if filed separately or if readily segregable from a larger file.

Destroy when no longer needed for administrative purposes.

10. *Paint Plans and Samples.*

Plans and paint samples for painting all areas of buildings lacking historical, architectural, or technological significance, and plans and samples for painting appliances, elevators, and other mechanical parts of all buildings.

Destroy when no longer needed for administrative use.

[NOTE: Paint plans and samples for the interior and exterior walls of buildings significant for historical, architectural, or technological reasons are not disposable under this item and must be scheduled by submitting an SF 115 to NARA.]

APPENDIX B: GLOSSARY

Cartographic and Architectural Records Management Terms

Section I: Abbreviations and Acronyms

CFR	Code of Federal Regulations
FRC	Federal Records Center
GRS	General Records Schedule
NARA	National Archives and Records Administration
RMO	Records management officer

Section II: Terms

ACCESSION. (1) The transfer of the legal and physical custody of permanent records from an agency to the National Archives. *See also* PERMANENT RECORDS. (2) The transfer of agency records to a Federal Records Center for temporary storage. The agency retains legal custody of the records. (3) The records so transferred.

ACCRETION. Records that add to or extend a series of permanent records that have previously been accessioned by the National Archives.

ADEQUACY OF DOCUMENTATION. A standard that requires sufficient and proper recording of agency actions and/or decisions. Derives from the legal requirement that agency heads "make and preserve records containing adequate and proper documentation of the organization, functions, policies, decisions, procedures, and essential transactions of the agency and designed to furnish the information necessary to protect the legal and financial rights of the Government and of persons directly affected by the agency's activities." (44 USC 3101)

AERIAL PHOTOGRAPH. Any photograph taken from the air.

APPRAISAL. The process of determining the value and thus the final disposition of records, making them either temporary or permanent.

ARCHITECTURAL AND ENGINEERING RECORDS. Drawings and related records that depict the concepts and precise measurements needed to plan and build static structures, such as buildings, bridges, and canals, as well as those needed to complete other pub-

lic works projects and produce such objects as weapons and machines. Included are design and construction drawings and related records. Also included are computer-aided design (CAD) and computer-aided manufacturing (CAM) system records that relate to architecture and engineering and require management like other electronic records.

ARCHIVES. (1) The noncurrent records of an organization preserved because of their continuing or enduring value. "National Archives of the United States" means those records that have been determined by the Archivist of the United States to have sufficient historical or other value to warrant their continued preservation by the Federal Government and that have been accepted for deposit in the Archivist's custody. *See also* PERMANENT RECORDS. (2) The organization or agency responsible for appraising, accessioning, preserving, and making available permanent records; also called archival agency. In the U.S. Government, it is the National Archives and Records Administration (NARA). When permanent records are transferred to the National Archives, they are placed in the custody of NARA's Office of the National Archives. (3) One or more buildings, or portions thereof, where permanent records are located after being accessioned by an archival agency; also called archival depository or archival repository.

ARCHIVIST OF THE UNITED STATES. The head of the National Archives and Records Administration (NARA).

CARTOGRAM. A simplified map used for displaying quantitative data whose base is ordinarily not true to scale.

CARTOGRAPHIC RECORDS. Graphic representations drawn to scale of selected physical and cultural features of the surface of the earth and other planets. Included are maps, charts (hydrographic/nautical, weather, and aeronautical), photomaps, orthophotomaps, atlases, cartograms, globes, relief models, and related records, such as field survey notes, map history case files, and finding aids. Also included are digital cartographic records, such as geographic information system records, which are managed like other electronic records. *See also* REMOTE SENSING IMAGERY RECORDS.

CHART. A special-purpose map designed for navigation, usually either nautical or aeronautical.

COMPREHENSIVE RECORDS SCHEDULE. A schedule or collection of schedules based on NARA-approved disposition authorities and issued as a directive or manual to cover all the records of an independent agency or department or of a bureau, service, or office within a department. Should also include instructions for nonrecord materials, whose disposition is based on agency needs. *See also* RECORDS SCHEDULE.

COORDINATE GRID SYSTEM. A plane-rectangular coordinate system usually based on, and mathematically adjusted to, a map projection in order that geographic positions (latitudes and longitudes) may be readily transformed into plane coordinates and the computations relating to them may be made by the ordinary methods of plane surveying.

CURRENT RECORDS. Records necessary for conducting the current business of an office and therefore requiring maintenance in office space and equipment. *See also* NONCURRENT RECORDS.

DESIGN DRAWINGS. *See* ARCHITECTURAL AND ENGINEERING RECORDS.

DESTRUCTION. In records management, the major type of disposal action, but not synonymous with disposal or disposition. Methods of destroying records include burning or pulping and selling or salvaging the record medium. *See also* DISPOSAL, DISPOSITION.

DISPOSABLE RECORDS. *See* TEMPORARY RECORDS.

DISPOSAL. (1) The actions taken regarding temporary, or nonpermanent, records after their retention periods expire and including either destruction or, in rare instances, donation. (2) Also, when so specified, the actions taken regarding nonrecord materials when no longer needed, especially their destruction. *See also* DESTRUCTION, DISPOSITION, TEMPORARY RECORDS.

DISPOSITION. (1) The actions taken regarding records no longer needed in current office space. These actions include transfer to agency storage facilities or Federal Records Centers, transfer from one Federal agency to another, transfer of permanent records to the National Archives, and disposal of temporary records. Disposition is the third stage of the records life cycle. *See also* DISPOSAL (1), LIFE CYCLE OF RECORDS. (2) The actions taken regarding nonrecord materials when no longer needed, including screening and destruction. *See also* DISPOSITION INSTRUCTIONS (2).

DISPOSITION AUTHORITY. (1) Legal approval empowering an agency to transfer permanent records to the National Archives or to carry out the disposal of temporary records. It must be obtained from NARA and also, for certain records proposed as temporary, from the General Accounting Office (GAO). (2) The agency's approval of disposition instructions for nonrecord materials.

DISPOSITION INSTRUCTIONS. (1) Directions for cutting off records and carrying out their disposition in compliance with NARA's regulations. (2) Directions for screening nonrecord materials and carrying out their disposal when no longer needed by the agency.

ENGINEERING RECORDS. *See* ARCHITECTURAL AND ENGINEERING RECORDS.

EVIDENTIAL VALUE. The usefulness of records in documenting the organization, functions, and activities of the agency creating or receiving them. Considered by NARA in appraising records for permanent retention. *See also* INFORMATIONAL VALUE, PERMANENT RECORDS, RECORDS.

FALSE COLOR IMAGE. A color image in which the dye color is not the same as the seen color. *See also* INFRARED.

FEDERAL RECORDS CENTER (FRC). A records center operated by NARA. *See also* RECORDS CENTER, STANDARD FORM 135.

FILE. (1) An accumulation of record or nonrecord materials arranged according to a plan. (2) A unit, such as a folder, microform, or electronic medium, that contains such records or nonrecord materials. (3) Storage equipment, such as a filing cabinet. (4) In electronic record-keeping, an organized collection of related data, usually arranged into logical records that are stored together and treated as a unit.

FILES. A collective term usually applied to all records and nonrecord materials of an office or agency. *See also* RECORDS.

FINDING AIDS. Indexes or other lists, whether manual or automated, that are designed to make it easier to locate relevant files. For cartographic and architectural records they are often used to locate individual record items.

GENERAL RECORDS SCHEDULE (GRS). A NARA-issued schedule governing the disposition of specified records common to several or all agencies.

GEODETIC CONTROL DATA. Information concerning the precise horizontal and vertical geodetic location of points on the surface of the earth and celestial bodies, including points obtained by photogrammetric techniques.

IMAGE. (1) The permanent record of the likeness of any natural or manmade features, objects, and activities reproduced on photographic materials. An image can be made by visual sensor or by instruments that monitor other segments of the electromagnetic spectrum, such as thermal infrared and high-resolution radar. (2) A visual representation, as on a radarscope.

INFORMATIONAL VALUE. The usefulness of records in documenting persons, places, things, or matters that have been dealt with by an agency, in contrast to documenting the agency itself. Considered by NARA in appraising records for permanent retention. *See also* EVIDENTIAL VALUE, PERMANENT RECORDS, RECORDS.

INFRARED. Pertaining to or designating the portion of the electromagnetic spectrum that is just beyond the red end of the visible spectrum, such as radiation emitted by a hot body. Invisible to the eye, infrared rays are detected by their thermal and photographic effects. Infrared wavelengths are longer than those of visible light and shorter than those of radio waves.

INTERNEGATIVE. A negative duplicate made from a color positive that is used in printing. Internegatives are used as a means to protect the original documents.

LIFE CYCLE OF RECORDS. The concept that records pass through three stages: creation, maintenance and use, and disposition. *See also* DISPOSITION (1).

MAPS AND CHARTS. *See* CARTOGRAPHIC RECORDS.

MEDIUM. The material, such as paper, film, disk, and magnetic tape, on which information can be recorded.

MICROFICHE. Miniaturized images arranged in rows to form a grid pattern on a card-size transparent sheet of film. Cartographic and architectural records are often reproduced one

image per film. The sheet usually contains a title that is readable without a magnifying device. Sometimes abbreviated as fiche.

MICROFILM. (1) Unexposed and unprocessed film suitable for use in micrographics. (2) High-resolution film containing microimages.

MICROFORM. Any form that contains reduced images, or microimages, usually on microfilm. Roll, or serialized, microforms include microfilm on reels, cartridges, and cassettes. Flat, or unitized, microforms include microfiche, microfilm jackets, aperture cards, and microcards (opaque).

MOSAIC. An assembly of overlapping aerial photographs matched to form a continuous photographic representation of a portion of the earth's surface; also called aerial mosaic.

MULTIBAND SYSTEM. A remote sensing system that produces more than one image of a single area in which each image shows a different wavelength band of the electromagnetic spectrum; also called multiband photography.

MULTISPECTRAL IMAGERY. Images obtained simultaneously in a number of discrete bands in the electromagnetic spectrum.

MULTISPECTRAL SCANNER. A remote sensing device that is capable of recording data in the ultraviolet and visible portions of the electromagnetic spectrum, as well as the infrared.

NONCURRENT RECORDS. Records that are no longer required to conduct agency business and are therefore ready for final disposition.

NONTEXTUAL RECORDS. A collective term usually applied to electronic, audiovisual, cartographic, remote sensing imagery, and architectural and engineering records, in contrast with manuscript and typescript paper records. *See also* SPECIAL RECORDS, TEXTUAL RECORDS.

OBLIQUE PHOTOGRAPH. A photograph taken with the camera axis directed intentionally between the horizontal and the vertical planes. *See also* VERTICAL PHOTOGRAPH.

ORTHOPHOTOGRAPH. A photographic copy, prepared from a perspective photograph, in which the displacement of images due to tilt and relief has been removed.

ORTHOPHOTOMAP. A photomap made from an assembly of orthophotographs. It may incorporate special cartographic treatment, photographic edge enhancement, color separation, or a combination of these techniques.

OVERLAY. A print or drawing on a transparent or translucent medium that is drawn to the same scale as a map, chart, or other graphic to show details that do not appear on the original.

PERMANENT RECORDS. Records appraised by NARA as having sufficient historical or other value to warrant continued preservation by the Federal Government beyond the time they are needed for administrative, legal, or fiscal purposes. Sometimes called archival

records. *See also* ARCHIVES (1), EVIDENTIAL VALUE, INFORMATIONAL VALUE, NONCURRENT RECORDS, STANDARD FORM 258.

PERSONAL PAPERS. Nonofficial or private papers that relate solely to an individual's own affairs. These must be clearly designated as such and kept separately from the agency's records; also called personal files or personal records.

PHOTOGRAMMETRIC MAP. A topographic map produced from aerial photographs and geodetic control data by means of photogrammetric instruments; sometimes called a stereometric or stereotopographic map.

PHOTOGRAMMETRY. 1. (general) The science or art of obtaining reliable measurements from photographic images. 2. (cartography) The science of preparing charts and maps from aerial photographs using stereoscopic equipment and methods; also called aerial photogrammetry or stereophotogrammetry.

PHOTOMAP. A reproduction of a photograph or photomosaic upon which the grid lines, marginal data, contours, place names, boundaries, and other data may be added. *See also* MOSAIC.

PICTOMAP. A topographic map in which the photographic imagery of a standard mosaic has been converted into interpretable colors and symbols by means of a pictochrome process. This process consists of three tonal separations photographically extracted from a photomosaic.

PLANE TABLE. A field device for plotting the lines of a survey directly from observations. It consists essentially of a drawing board mounted on a tripod, with a leveling device designed as part of the board and tripod. *See also* SHEET.

PRESERVATION. (1) The provision of adequate facilities to protect, care for, and maintain records. (2) Specific measures, individual and collective, undertaken to maintain, repair, restore, or protect records.

PROGRAM RECORDS. Records documenting the unique, substantive functions for which an agency is responsible, in contrast to administrative records.

PROOF SHEET. A trial print, produced by any method, that is designed to be marked up for necessary corrections or approval.

PUBLICATIONS. Documents printed or otherwise produced for wide distribution inside or outside an agency. Included are annual reports, brochures, pamphlets, books, handbooks, and maps. Also included are instructional and informational materials in audiovisual form. According to 44 USC 1901, a U.S. Government publication is "informational matter which is published as an individual document at Government expense, or as required by law."

RECORD GROUP. A body of organizationally related records established by an archival agency after considering the organization's administrative history and complexity and the volume of its records. NARA uses record group numbers to keep track of agency records

during and after the scheduling process, including those transferred to Federal Records Centers and/or the National Archives.

RECORDKEEPING REQUIREMENTS. Statements in statutes, regulations, or agency directives that provide general and specific information on particular records to be created and maintained by the agency. Since each agency is obligated by statute to create and maintain adequate and proper documentation of its functions and activities, agency recordkeeping requirements should be issued for all activities at all levels and for all media and should distinguish record from nonrecord materials for agency purposes. *See also* ADEQUACY OF DOCUMENTATION.

RECORDS. According to 44 USC 3301, the term "includes all books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes, extra copies of documents preserved only for convenience of reference, and stocks of publications and of processed documents are not included."

RECORDS CENTER. A facility for the low-cost storage and servicing of records pending their final disposition. Included are NARA-authorized agency records centers and NARA-operated Federal Records Centers.

RECORDS DISPOSITION REQUEST. *See* STANDARD FORM 115.

RECORDS MANAGEMENT. The planning, controlling, directing, organizing, training, promoting, and other managerial activities related to the creation, maintenance and use, and disposition of records to achieve adequate and proper documentation of Federal policies and transactions and effective and economical management of agency operations; also called records administration.

RECORDS MANAGEMENT OFFICER (RMO). The person assigned responsibility by the agency head for overseeing an agencywide records management program; also called records officer or records manager.

RECORDS SCHEDULE. A document that provides the authority for the final disposition of recurring or nonrecurring records; also called records disposition schedule, records control schedule, records retention schedule, or schedule. Includes the Standard Form 115, the General Records Schedules, and the agency records schedule, which when completed becomes a comprehensive records schedule that also contains agency disposition instructions for nonrecord materials. *See also* COMPREHENSIVE RECORDS SCHEDULE, GENERAL RECORDS SCHEDULE, STANDARD FORM 115.

RECTIFIED PRINT. A photograph in which tilt displacement has been removed from the original negative and that has been brought to a desired scale. The term is principally applied to aerial photographs.

RECTIFIER. A specially designed projection printer whose geometry is variable in order to eliminate tilt from an aerial negative.

RELIEF MAP. A map that shows land or submarine bottom relief in terms of height above or below; among the techniques used are contours, hypsometric tints, shading, spot elevations, and hachures.

REMOTE SENSING IMAGERY RECORDS. Aerial photographs and other visual images of the surface of the earth or other planets taken from airborne or spaceborne vehicles to evaluate, measure, or map the cultural and/or physical features of the landscape. Related indexes are also included. *See also* CARTOGRAPHIC RECORDS.

REQUEST FOR RECORDS DISPOSITION AUTHORITY. *See* STANDARD FORM 115.

RETENTION PERIOD. The length of time that records are to be kept. *See also* DISPOSITION (1).

RETIREMENT. The transfer of records to agency storage facilities or a Federal Records Center. *See also* ACCESSION (2), DISPOSITION (1).

SCHEDULING. The process of developing schedules for the disposition of records, along with disposition instructions for nonrecord material. *See also* DISPOSITION, RECORDS SCHEDULE.

SERIES. File units or documents arranged according to a filing system or kept together because they relate to a particular subject or function, result from the same activity, document a specific kind of transaction, take a particular physical form, or have some other relationship arising out of their creation, receipt, or use, such as restrictions on access and use; also called record series.

SHEET. A single map, either a map that is complete in one sheet or that belongs to a series. *See also* PLANE TABLE, SMOOTH SHEET.

SMOOTH SHEET. A final plot of field control and hydrographic development such as soundings, fathom curves, wire drag areas, etc., to be used in chart construction.

SPECIAL RECORDS. Types of records maintained separately from textual or paper records because their physical form or characteristics require unusual care and/or because they have nonstandard sizes. Included are electronic, audiovisual, microform, cartographic and remote sensing imagery, architectural and engineering, printed, and card records. *See also* NONTEXTUAL RECORDS.

STANDARD FORM 115, REQUEST FOR RECORDS DISPOSITION

AUTHORITY. The form used by Federal agencies to obtain disposition authority from NARA for records to which the General Records Schedules are inapplicable. *See also* GENERAL RECORDS SCHEDULE.

STANDARD FORM 135, RECORDS TRANSMITTAL AND RECEIPT. The form to be submitted by Federal agencies before transferring records to a Federal Records Center.

STANDARD FORM 258, REQUEST TO TRANSFER, APPROVAL, AND RECEIPT OF RECORDS TO NATIONAL ARCHIVES OF THE UNITED STATES. The form used by Federal agencies to transfer legal and physical custody of permanent records to the National Archives.

TECHNICAL REFERENCE FILES. Nonrecord copies of articles, periodicals, reports, studies, vendor catalogs, and similar materials that are needed for reference and information but are not properly part of the office's records.

TEMPORARY RECORDS. Records approved by NARA for disposal, either immediately or after a specified retention period; also called disposable records. *See also* DISPOSAL, PERMANENT RECORDS.

TERRAIN MODEL. A three-dimensional graphic representation of an area that shows the conformation of the ground; it is modeled to scale and is usually handpainted to realistically depict manmade and natural physical features. The vertical scale is usually exaggerated, without severe distortion, to accentuate the aspect of relief.

TEXTUAL RECORDS. The term usually applied to manuscript and typescript paper records, as distinct from electronic, audiovisual, cartographic and remote sensing imagery, and architectural and engineering records. *See also* NONTEXTUAL RECORDS, SPECIAL RECORDS.

TOPOGRAPHY. (1) The configuration of the surface of the earth, including its relief, the position of its streams, roads, cities, etc. (2) The earth's natural and physical features collectively.

TRIANGULATION. A method of surveying in which the stations are points on the ground that are located at the vertices of a chain or network of triangles. The angles of the triangles are measured instrumentally and the length of the triangles' sides are derived by computation from selected sides, which are called base lines, and are measured directly on the ground.

ULTRAVIOLET. Light rays that lie just beyond the violet end of the visible spectrum. Ultraviolet rays have extremely short wavelengths.

UNSCHEDULED RECORDS. Records for which no final disposition has been determined. *See also* DISPOSITION (1), RECORDS SCHEDULE.

VERTICAL PHOTOGRAPH. An aerial photograph that is taken with the axis of the camera maintained as closely as possible to a truly vertical position, with the resulting photograph laying approximately in the horizontal plane. *See also* OBLIQUE PHOTOGRAPH.

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